## ABSTRACT

A substrate processing method which removes an ArF resist film from a wafer having the ArF resist film. As an ultraviolet irradiation process is performed on the ArF resist film, and then an ozone gas and water vapor are fed to the ArF resist film, the ArF resist film is altered in a water-soluble state. Thereafter, the ArF resist film is removed from the substrate by feeding pure water to the ArF resist film altered into the water-soluble state.

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